

# Notice of Allowability

Application No.

10/070,317

Applicant(s)

VERHAAK, MICHAEL JOHANNES  
FRANCISCUS MA

Examiner

Jonas N. Strickland

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment after-final filed on 10/19/04.
2. ☒ The allowed claim(s) is/are claims 9-26.
3. ☒ The drawings filed on 05 March 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***Allowable Subject Matter***

Claims 9-26 are allowed.

The following is an examiner's statement of reasons for allowance: The instant application is allowable over the cited prior art, as the cited prior art fails to disclose a process for the catalytic reduction of nitrous oxide with a catalyst comprised of a zeolite promoted with at least one precious metal selected from the group consisting of ruthenium, rhodium, palladium, and gold; the catalyst thereby comprising a zeolite, which contains at least one combination of metals selected from the group consisting of iron and ruthenium, iron and rhodium, iron and palladium and iron and gold.

Li et al. discloses a catalytic reduction process for the reduction of nitrogen oxides using methane in the presence of oxygen. Li et al. continues to disclose wherein methane serves as a reducing agent and the catalyst is a promoted iron-containing zeolite. The catalyst may also be promoted with a precious metal cation, such as rhodium (see abstract). Li et al. continues to disclose wherein the catalyst may be exchanged with a cation of palladium, as well as ruthenium (col. 7, lines 1-8). The methane/NO<sub>x</sub> ratio ranges from 0.2 to 10 (col. 8, lines 27-37). The process is carried out at a temperature of about 250°C and pressures between about 1 and 300 atmospheres (col. 8, lines 18-26). Li et al. continues to disclose wherein it is known to use a combination of reducing agents (col. 7, lines 1-8 and col. 10, lines 33-41).

However, Li et al. does not disclose a catalyst comprised of a zeolite promoted with at least one precious metal selected from the group consisting of ruthenium, rhodium, palladium, and gold; the catalyst thereby comprising a zeolite, which contains

at least one combination of metals selected from the group consisting of iron and ruthenium, iron and rhodium, iron and palladium and iron and gold. Li et al. does not disclose a combination of cations promoting a zeolite. Furthermore, Li et al. does not disclose the catalytic reduction of nitrous oxides, but rather nitrogen oxides.

Applicant's declaration gives sufficient evidence explaining the distinction between the zeolite catalysts for reducing nitrogen oxides as disclosed by Li et al. in comparison to the zeolite catalyst as instantly claimed by Applicant, which is directed towards reducing nitrous oxides.

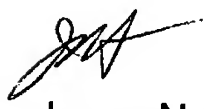
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonas N. Strickland whose telephone number is 571-272-1359. The examiner can normally be reached on M-TH, 7:30-5:00, off 1st Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonas N. Strickland  
November 10, 2004



STEVEN BOS  
PRIMARY EXAMINER  
GROUP 1100